

# The United States-Iraq Cooperative Health Program

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THE objective of the United States program of public health assistance in Iraq is to help the Iraqi Government organize modern, efficient public health services in the 14 provinces (liwas) and the major cities of the country. Although this has been the objective of the program since its inception in 1952, it was only after 2½ years had elapsed that it was formalized into a 5-year plan. To achieve the objective, it was obvious that rather large numbers of public health personnel would have to be recruited and trained. It was the result of planning for this training that the 5-year plan evolved.

## Background

Iraq was formerly known to the West as Mesopotamia, which means "the land of two rivers." The country depends upon the Tigris and Euphrates Rivers for irrigation and heavy commerce.

The northern part of the country is mountainous, but in the southern part there are large marshy areas. The western part of the country forms part of the Great Arabian Desert.

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Of the three main cities in the country—Basra, Baghdad, and Mosul—Basra is a port city near the Persian Gulf; Baghdad, the largest city, lies on the Tigris River in the mid-portion of the country; and Mosul is on the Tigris River in the north, away from the main lines of communication.

The climate in the central and southern areas is extremely hot in summer and mild in winter. North to Mosul and the mountains, the summer climate is less severe.

The economy of Iraq is based upon agriculture and oil resources. For the most part, agriculture is dependent upon irrigation. As a result of the slow gradient of most of the irrigated land the flow of water in irrigation ditches is sluggish. In addition, to prevent salting of the soil, drainage canals have been built to draw off the irrigation water. Such irrigation and drainage ditches provide conditions favorable for the growth of snails which serve as the intermediate host in the transmission of schistosomiasis. This disease threatens to become a serious detriment to public health unless adequate measures of prevention are incorporated in the government's plans for irrigation and drainage.

The population of Iraq, according to the 1947 census, is approximately 5 million; 700,000 live in Baghdad, 100,000 in Basra, and 150,000 in Mosul. An estimated 200,000 Bedouin nomads roam the desert region and the remainder live in small villages and other rural areas. The prevailing religion is Mohammedanism.

The government is a constitutional monarchy with an elected parliament and several ministries presided over by a prime minister. A distinctive feature of the Iraqi Government is the Ministry of Development, whose programs of economic growth are formulated by a Development Board with the Prime Minister serving as chairman. The objective of the Development Board is to use its portion of the oil revenues to develop the agricultural and industrial potential of the country in such a way as to assure a sound economy after the oil reserves are exhausted. Seventy percent of the substantial oil revenues are allotted to the Development Board to finance its economic plans. The remaining 30 percent are allotted to the Ministry of Finance for distribution to various ministries for the normal operations of the government and for social welfare, education, and health.

### Health Conditions

Although it is known that health conditions in Iraq are not good, it is difficult to speak with precision because vital and morbidity statistics are very incompletely reported. The mortality rate is commonly estimated to be about 25 per 1,000 population and the infant mortality rate 250 per 1,000 live births.

Undoubtedly, the most prevalent diseases in the country are those which affect the intestinal tract: bacillary and amebic dysentery and worm infestation. Nutritional deficiencies are prevalent, but actual starvation is limited mostly to infants. Starvation of infants is prevalent and results from lack of knowledge about modern artificial feeding methods.

Although malaria is no longer endemic in Baghdad and the immediate vicinity, it is still a problem in the southern date- and rice-growing areas and in the northern mountains. Schistosomiasis is a serious problem in some localities and threatens to become more widespread unless appropriate precautions are taken in connection with the irrigation projects which are being planned by the Development Board.

Tuberculosis is moderately prevalent in Iraq, and trachoma causes much blindness, particularly in the villages. Endemic typhus fever occurs in Iraq, and epidemics of smallpox occur almost annually. Localized outbreaks of

diphtheria and meningococcus meningitis are sporadic. Hookworm infestation is prevalent in some areas. Bejel is widely distributed in some remote rural areas.

### Health Facilities

Of about 900 registered physicians in Iraq, 70 are foreigners. Almost all of the Iraqi physicians are graduates of the Royal College of Medicine in Baghdad. Six years of basic medical education at the college is provided free of charge by the government. In return, the graduates are obligated for 4 years of governmental service, divided among the Royal Hospital, the military service, and general practice in rural areas.

There are fewer than 600 registered nurses. About 260 are graduates of 3-year training schools, and the remainder are graduates of 1-year training courses in small hospitals.

There are about 5,000 hospital beds in the country, or 1 per 1,000 population for the country as a whole. The major portion of the hospital beds are concentrated in the city of Baghdad. However, the capital city of each liwa has a general hospital and in some instances 1 or 2 specialized or military hospitals. Free medical care is provided in more than 90 percent of them. Nevertheless, most of the hospitals are old, poorly equipped, and understaffed. Laboratory facilities in almost all of the hospitals and dispensaries are inadequate for accurate confirmation of diagnoses.

Of the dispensaries, only a few are operated by physicians. The majority are operated by "health officials" who correspond roughly to male nurses in the United States, or by "dressers" who are men trained locally. Most of these dispensaries we would term first-aid stations. In some of the mountainous areas, mule-train dispensaries have been organized in an attempt to bring rudimentary medical care to the people.

In each of the 14 liwas (provinces), there is a central liwa hospital which, except in the Baghdad Liwa, is personally supervised by the chief medical officer who is administratively responsible to the governor of the liwa for all medical and public health activities within the liwa. The chief medical officer obtains his professional guidance, operating funds, and assign-



**Foreign quarantine inspector at work. This service is under the direction of an American trained Iraqi physician.**

ment of personnel from the Ministry of Health.

In the field of sanitation, the government, under the supervision of the Ministry of the Interior, is progressing rapidly in bringing clean water to its people. The major cities and most of the towns now have modern water treatment plants and distribution systems. However, in most of these cities and towns, personnel training and plant supervision have not yet progressed to the point where the water can be considered safe by Western standards. As a logical first step towards promoting safe water supplies for villages, the Development Board is conducting a survey of the ground waters of the country.

Less has been accomplished in developing sanitary disposal of sewage, but the government officials are acutely aware of the need and a bill has been introduced in Parliament which would

set up a commission on municipal drainage and sewerage design and construction. (The use of sanitary privies is almost unknown.)

Large numbers of villages depend for drinking purposes entirely upon irrigation water that is often highly contaminated. This water is obviously a serious health hazard.

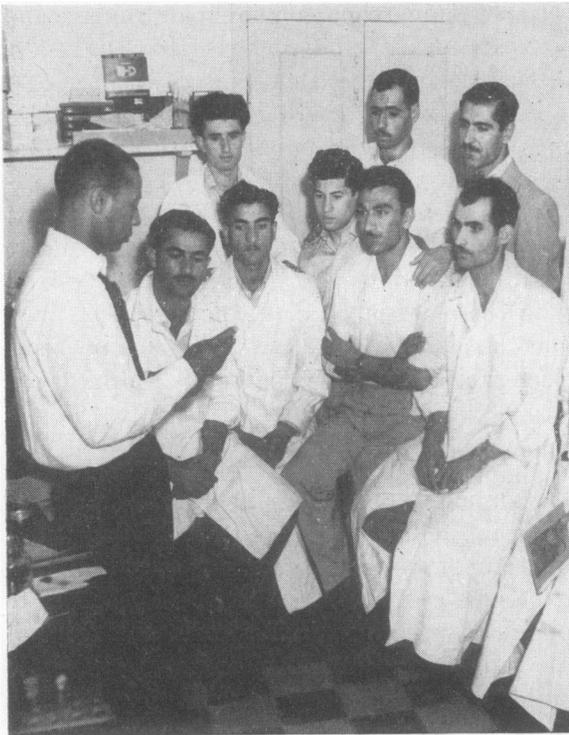
With respect to the other aspects of public health and sanitation, the responsibility rests with the chief medical officers of the 14 liwas and the city health officers of the major cities. Such sanitation services are quite rudimentary.

### **Fellowship Program**

As a first step in the United States assistance program, fellowships were awarded and training courses started on an empirical basis. Soon it became evident that it was not practical to plan a training program without a concept of the type of organization one was trying to build. Therefore, a proposed organization chart was designed, and soon a proposal was drafted for the training of the personnel to staff the organization. The organization chart and the training proposal were prepared by the Ministry of Health with the assistance of consultants from the United States Operations Mission, the World Health Organization, and the British Government.

The plan encompassed the training of many types of hospital personnel as well as public health and sanitation personnel. Realistic consideration to recruitment problems and possible sources of training have also been included in the plan, and detailed job descriptions have been prepared for all of the positions.

To date, 31 fellowships for health instruction in the United States have been granted as follows: public health administration (physicians), 7; hospital administration, 6; vital statistics, 3; sanitary engineering, 2; surgery, 2; pathology, 2; ophthalmology (4-month grant), 2; and 1 each in internal medicine, obstetrics, general hygiene, anatomy, ear-nose-throat, urology, and public health laboratory. Also the following 19 health fellowships have been granted for training at the American University of Beirut in Lebanon: public health nurses, 7; sanitarians, 4; laboratory technicians, 5; and hospital administrators, 3.



**An American laboratory technician teaching a class of Iraqi students.**

Trainees most difficult to recruit have been those for public health administration and public health nursing. Iraqi physicians do not consider positions in public health administration financially attractive. It is also difficult to recruit for public health nursing because few graduate nurses want to take the training and few are sufficiently proficient in the English language to benefit from courses offered by the United States. Proficiency in English is essential because there are no schools of public health nursing where the instruction is given in Arabic. The teaching in the public health school at the American University of Beirut is in English.

Nurse training at the Royal Hospital, the only governmentally recognized 3-year nursing school in the country, is conducted in Arabic.

The ministry is attempting to break these bottlenecks by providing better pay for full-time public health physicians and by establishing a new nursing school. Such a school will be established with our assistance in the near future. Instruction will be given in English in the new school, and eventually instruction in nursing will be in English instead of Arabic since

there is little professional Arabic literature in the field of nursing.

All Iraqi personnel who complete courses of training either under fellowships or in the cooperative projects described below are followed up to see that they are properly placed and that their newly acquired skills are fully utilized. In addition, the physicians who have studied public health administration meet regularly as a group to discuss Iraq's public health problems and to seek solutions to the difficulties they are encountering in applying the techniques they have learned.

In all training programs it is as important to provide appropriate orientation toward democratic public health objectives for administrative leaders as it is to train professional and semiprofessional workers to do the field work. Without sympathetic and intelligent administrative leadership, the field workers cannot be fully effective however well trained they are. Therefore, a policy has been adopted of providing grants to high ranking Iraqi public health officials to enable them to visit America for carefully planned and supervised tours of American institutions and for conferences with American leaders in various fields of public health and medical care.

#### **Basra Demonstration Project**

In addition to grants and fellowships, the program provides on-the-scene training through a variety of demonstration projects.

At Basra, near the Persian Gulf, the ministry is being assisted in establishing a public health demonstration and training project. The purpose of this project is to set up, in this one liwa, a public health organization like the one envisioned in the 5-year plan.

American personnel with Iraqi counterparts fill the positions of senior health officer, sanitary engineer, sanitarian, public health nurse, and health educator. An Iraqi epidemiologist also has been provided, and the ministry has assigned three Iraqi public health nurses who were trained under our fellowship program at the American University of Beirut.

Iraqi personnel are being trained, and as they become proficient in their duties the project activities will be expanded until they take in



**A home visit by an Iraqi public health nurse of the Basra project.**

the entire liwa. Instruction is being given to public health nurses, health visitors, sanitarians, and health educators. Also assistance is being given in connection with public health administration and modern public health techniques to the Iraqi physicians who are associated with the program. When the field activities are well established, this project will serve as a center for formal training and for supervised field experience for personnel to staff similar projects in other parts of Iraq.

Thus far, the activities of the project have been concentrated largely upon health education and the training of personnel. Ten health visitors and 12 sanitarians have been trained, and the health visitors have been engaged in supervised field work for a year. For example, in the one month of May 1955 the public health nursing and health visitors' section gave service to 8 clinic sessions and 34 school health sessions;

made 1,457 home visits, and gave 19 group talks.

One accomplishment of this project has been the demonstration that a citizens health committee can organize and function effectively in Iraq, a country which has been relatively unaware of this civic progress. These committees are composed entirely of Iraqi citizens who elect their own officers and conduct their own meetings. One citizens committee has been working for almost a year. Its work will be the base for an aggressive health education program. Additional committees are organizing with the full support and encouragement of the provincial governor, the mayor, and the chief medical officer.

The sanitary engineer assigned to the project is studying conditions under which a proposed drainage and sewerage system for the city of Basra will be installed.

It is planned that there will be a central

health center in the city of Basra which, in addition to providing clinical health services for the people of the immediate vicinity, will provide offices for the liwa health personnel. Branch health centers will be located in the various communities of the liwa in such a way that they will be accessible to the entire population.

### **Environmental Sanitation Project**

An American sanitary engineer has been assigned to the Ministry of Health in order to give substance to its department of sanitation.

Initially, this engineer devoted the greater portion of his time to the city of Baghdad. He supervised and trained the city's sanitarians and revised and strengthened the city's program of sanitation of public eating places. A food handlers' school was established, and instruction has been given to 850 food handlers. The engineer introduced an educational approach to restaurant inspections. In addition, he provided consultation on many aspects of the city's sanitation problems. City authorities were persuaded to operate a sanitary landfill for garbage disposal. Improved design and supervision were introduced in the construction of cesspools and septic tanks by private contractors. Practices at milk pasteurization plants were improved.

Baghdad has now acquired a well-trained Iraqi sanitary engineer who has assumed these responsibilities although our sanitary engineer continues to give guidance and technical advice. Outside of Baghdad, requests for his assistance thus far have been mostly in connection with drainage and sewage disposal problems. Plans for expansion of his activities are under consideration.

### **Hospital Facilities Project**

The Iraqi Government intends to launch a hospital and health center construction program which will cost \$20 or \$30 million or possibly more. Since Iraq lacks the specialized personnel required to plan an efficient hospital system or to design modern hospitals, a hospital architect and a hospital administrator have been assigned to the Ministry of Health by

the United States Operations Mission. At present, they are engaged in functional studies, preliminary sketches, and cost estimates for a new Royal Medical Center (referred to locally as Medical Town) to replace the present Royal Hospital. This will include an 850-bed government hospital, a 150-bed private hospital, a central building for the Royal Medical College, and a nursing school. It is estimated that the project will cost about \$12 million.

The role of the American team is (a) to make preliminary functional studies of the proposed buildings; (b) to represent "the client" (the Ministry of Health) in negotiations of contracts with architectural firms for the production of working drawings and specifications and the supervision of construction; and (c) to represent the client in relation to the smaller projects which are designed and constructed by Iraq's Department of Public Works.

The hospital administrator assigned to the project is directly concerned with the portion of the ministry's 5-year plan that deals with the training of hospital personnel. Of special concern to him are the Iraqi personnel who have completed training in hospital administration either in the United States or at the university in Beirut. He helps with the placement of these personnel in appropriate positions and keeps in close contact with them during the period of adjustment to their new duties. It is expected that these former trainees, under the guidance of the American hospital administrator, will spearhead the improvement of hospital administration practice in Iraq.

### **Village Life Improvement**

One program of the United States mission cuts across the various technical specialties and aims to bring about improvement in all aspects of the living standards in the villages of Iraq. Public health has an important role with respect to improvement of water supply and village sanitation, control of disease vectors, and home hygiene services.

This program is one of several types which are referred to as "impact programs." Its objective is to carry some of the simple benefits of modern technology more directly to the villagers than can usually be done through the nor-

mal operations of government agencies. Iraqi personnel are trained and then assigned to live in the villages and show the inhabitants how to improve their living conditions.

The Iraqi "rural affairs officers," who are being trained under this program, are known as multiple purpose workers. Sanitation and hygiene are important subjects in their training course, which also includes some simple methods of improving agricultural practices, homemaking, child care, and road building.

Two other projects are in operation at present. The first is the maternal and child health demonstration and training project, which has been reported in detail in *Children*, volume 2, March-April, 1955. The second project, recently instigated with American assistance, is a school for laboratory technicians.

### Comments

The region which is now Iraq has been the abode of some of the world's oldest and proudest civilizations. It was the breadbasket of the Babylonian and the Moslem Empires. Its soil has provided a prosperous living for populations estimated as high as 40 million.

However, the Mongol invasions decimated the population and destroyed the elaborate irrigation system upon which the livelihood of the people depended. These invasions struck the civilization of the area with what Toynbee would call an "overwhelming challenge." The following four centuries (since 1517), under Ottoman rule, drained the people of their initiative and ambition and instilled in them a deep, abiding distrust of centralized government. In response, they devised a form of subsistence living which made it possible for them to survive under the most adverse conditions.

Since Iraq's liberation in the First World War, the country has, with British assistance,

made much progress in reviving the art of self-government (parliamentary), but much remains to be done to improve the standards of living of the common people. In recent years the new revenues derived from the exploitation of the country's oil resources give hope of a rapid acceleration in the achievement of this objective.

The United States offer of the services of experienced American personnel aims to help rehabilitate the nation's economy and assist in bringing better living conditions to the people. The Government of Iraq has welcomed this assistance and has sincerely tried to carry out its part of the cooperative agreements. That it has not been entirely successful in this is due to various factors which include: (a) its inadequate fiscal and personnel systems, which impose formidable administrative barriers; (b) the narrow base of the country's educational system, restricting opportunity, especially for girls, with the resultant scarcity of qualified candidates for training; (c) frequent and numerous cabinet changes in recent years; and (d) the great flood of the spring of 1954.

Despite these handicaps substantial progress has been made with the public health program. The public health program has been chiefly a "pump-priming" operation to encourage the granting of appropriate emphasis to preventive medicine and sanitation in the country's economic plans. The country has sufficient resources to permit it to support a completely modern medical and public health establishment. The problem has been to avoid allowing the public demand for curative medical facilities to overemphasize personal medical care at the expense of public health facilities needed.

Progress to date has been gratifying, and for the future there is justification for increased optimism as confidence in, and respect for, public health services take hold.



# technical publications

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## **The Engineer in the U. S. Public Health Service**

*Public Health Service Publication No. 455. 1955. 20 pages.*

This illustrated brochure for the recruitment of sanitary engineers describes the wide variety of activities of the commissioned engineer officer in the Public Health Service. Qualified sanitary engineers are invited to join the Service and share in its 150-year-old tradition and progress.

Discussed are the many opportunities the Service offers in the field of environmental sanitation—water supply, waste disposal, milk and food, vector control, and the challenging new fields of air pollution and radiological health.

The various facilities including the Robert A. Taft Sanitary Engineering Center, the largest research institution in the field, are depicted. Opportunities for service overseas with the United States health missions are explained.

The booklet also delineates the role of the engineer members of the Public Health Service Commissioned Reserve in meeting emergency national health problems.

## **Biological Products, Revised, 1955**

*Public Health Service Publication No. 50. 1955. 48 pages. 20 cents.*

Superseding Miscellaneous Publication No. 39, this publication lists establishments holding licenses for the preparation and sale of viruses, serums, toxins and analogous prod-

ucts, and the trivalent organic arsenic compounds.

The licenses granted establishments for the products specified do not imply an endorsement of the preparations. A licensed establishment is inspected regularly for personnel technical ability and sanitary condition of premises. In addition, manufacturing methods must be adjudged safe, and the establishment must meet requirements, specified by the Division of Biologics Standards of the National Institutes of Health, designed to insure the continued safety, purity, and potency of products.

## **Sources of Morbidity Data, Listing Number 3. 1955.**

*Public Health Service Publication No. 459. 99 pages.*

The third listing of projects in the files of the Clearinghouse on Current Morbidity Statistics Projects contains descriptions of 145 projects, supplementing the 332 described in listings No. 1 and 2 (Public Health Service Publications 332 and 399).

Listing No. 3 has a section of supplementary notes on projects in listings No. 1 and 2, that represent a systematic followup on all projects in the two listings that were in progress when their descriptions were received by the clearinghouse.

In listing No. 3 there is an index by type of data collection, also an alphabetical list of principal investigators, and, for the first time, an index of organizations and institutions participating in the projects.

Because the listings of the clearinghouse are published primarily for the use of actual and potential contributors, the number of bound copies available for other distribution is limited. Tear sheets for all projects are on file, however, and these will be mailed free of charge to persons inquiring about studies of a particular type.

## **NIDR Current Clinical Studies and Patient Referral Procedures at the Clinical Center**

*Public Health Service Publication No. 456. 1955. 8 pages.*

Described in this pamphlet are current clinical studies of the National Institute of Dental Research and the types of patients desired for participation in these studies.

It is intended as an aid to dentists and to others in dental schools, clinics, and health services who wish to refer patients to the institute for study and treatment at the Clinical Center in Bethesda, Md. Also explained is the procedure for referral of patients and the requirements for admission to the Clinical Center.

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The Public Health Service does not supply publications issued by other agencies.

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